



**WEST COAST COLLABORATIVE**  
A public-private partnership to reduce diesel emissions

## Nevada State Office of Energy: School Bus Exhaust & Anti-Idling Retrofit Project

The West Coast Collaborative (WCC) is pleased to announce the Nevada State Office of Energy's (NSOE's) completion of its project to retrofit heavy-duty diesel school buses in six Nevada counties. This project was implemented using \$486,662 in U.S. Environmental Protection Agency (U.S. EPA) Clean School Bus USA grant funding.

### What is the Project?

Retrofitted 348 school buses with Diesel Oxidation Catalyst (DOC) and Closed Crankcase Ventilation (CCV) systems to reduce tailpipe exhaust, as well as Fuel Operated Heaters (FOHs) to reduce idling emissions and diesel consumption. The following Nevada counties will benefit from the emissions reductions generated by this project: Churchill, Douglas, Elko, Humboldt, Lyon and Washoe.

### How was this project funded?

The WCC provided \$486,662 in Clean School Bus USA grant funds to support this project. In addition, NSOE and the Nevada Division of Environmental Protection (NDEP) provided in-kind staff time and resources to help manage project implementation and reporting.

### Why is this project important?

Diesel school buses routinely expose children to particulate matter (PM) and other harmful pollutants. Exposure to diesel exhaust has been associated with decreased lung function and retarded lung development and can also exacerbate the symptoms of asthma, bronchitis and pneumonia. This project will reduce children's exposure to diesel emissions as well as the negative health affects associated with exposure.

### What are the Environmental Benefits?

Over the lifetime of the project, the emissions from the 348 affected engines will be reduced by 9.8 fine particulate matter (PM<sub>2.5</sub>) tons, 193.3 nitrogen oxide (NO<sub>x</sub>) tons, 28.6 hydrocarbon (HC) tons, 102.1 carbon monoxide (CO) tons, 6412 carbon dioxide (CO<sub>2</sub>) tons. The project is anticipated to generate \$5 worth of annual monetary health benefits for every \$1 spent by reducing PM<sub>2.5</sub> exposure in the affected counties. In addition, the FOH anti-idling retrofits are expected to conserve 577,691 gallons of diesel fuel over their in-use lives, which will reduce operational costs for the participating school bus fleets.

### Who are the Partners on this project?

The project was led by NSOE, an agency responsible for the development of Nevada's energy resources in harmony with local economic needs and the state's natural resources. NSOE received the Clean School Bus USA grant award through the WCC, and distributed the grant funds to the participating school district fleets. NSOE was also responsible for data monitoring and reporting for the project with technical assistance provided by NDEP's Bureau of Air Quality Planning.

### What is the Collaborative?

The WCC is an ambitious partnership between leaders from federal, state, and local government, the private sector, and environmental groups committed to reducing diesel emissions along the West Coast. Partners come from all over Western North America, including California, Oregon, Washington, Alaska, Arizona, Idaho, Nevada, Hawaii, the Pacific Islands, Canada, and Mexico. The WCC is part of the U.S. EPA National Clean Diesel Campaign (NCDC).

[www.epa.gov/cleandiesel](http://www.epa.gov/cleandiesel)

### How can I find out more Information?

For more information on this project, please contact John Mikulin at U.S. EPA ([mikulin.john@epa.gov](mailto:mikulin.john@epa.gov) / 415-972-3956). For more information on the WCC, please visit our website.

[www.westcoastcollaborative.org](http://www.westcoastcollaborative.org)